

# Kevin Thielen | Curriculum Vitae

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## Education

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- University of Oxford** **Oxford, UK**
  - *Atmospheric, Oceanic and Planetary Physics (DPhil).* 2016 -2020  
Thesis Title - Effects of Ice Morphology on Mixed Layer Dynamics in the Marginal Ice Zone  
Advisor - Dr. Andrew Wells
- Eckerd College** **St. Petersburg, FL**
  - *Mathematics and Physics (BSc), Summa Cum Laude.* 2012-2016  
Thesis Title - Cyclic Aversion: Analyzing Linguistic Categories in Optimality Theory using Graph Theory  
Advisor - Dr. Nazarre Merchant

## Previous Employment

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- Eckerd College, Department of Chemistry** **St. Petersburg, FL**
  - *Research Assistant, Supervisor - Dr. Joseph Larkin* May 2016 - September 2016
    - Conducted a computational investigation into the reactivity of Bortezomib (a chemotherapeutic) with various supplemental anticancer agents using a wide variety of density functionals.
    - Results currently being prepared for publication.
- Eckerd College, Department of Mathematics** **St. Petersburg, FL**
  - *Ford Apprentice Scholar, Mentor - Dr. Nazarre Merchant* January 2015 - May 2016
    - Developed a graph theoretical framework to explore the relation of languages and grammars of any given Optimality Theory system.
    - Work resulted in an undergraduate thesis submitted in part for the fulfillment of a BSc. in Mathematics
- National Oceanic and Atmospheric Administration/Naval Research Lab** **Washington, D.C.**
  - *NOAA Hollings Scholar, Supervisors - Dr. Dennis Socker, Pat Mulligan* May 2015 - August 2015
    - Development and analysis of a Cosmic Ray and Solar Energetic Particle removal algorithm to be used on board next generation operational coronagraphs of NOAA for space weather prediction.
    - Presented results to NESDIS administrators at NOAA headquarters in Silver Springs Maryland.
- Eckerd College, Department of Mathematics** **St. Petersburg**
  - *Research Assistant, Supervisor - Dr. Jianqiang Zhao* May 2014 - August 2014
    - Investigation into properties of bernoulli numbers and applications to multiple harmonic sums and multiple zeta functions.
    - Results published in the International Journal of Number Theory
- Eckerd College, Department of Physics** **St. Petersburg**
  - *Research Assistant, Supervisor - Dr. Stephen Weppner* May 2013 - September 2013
    - Development of a first principles equation of state for the examination of mass-radial relationships of planets and materials.
    - Results published in the Monthly Notices of the Royal Astronomical Society.

## Publications

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- K. Thielen “An Introduction to Formal Linguistic Theory: A Comparison of Optimality Theory and Harmonic Serialism.”, The Eckerd Scholar 2016
- K. Thielen, V. Tien, “Python and Physical Modeling”, Computing in Science & Engineering, 18, 8-10 (2016)
- S. P. Weppner, J. P. McKelvey, K. D. Thielen, and A. K. Zielinski, “A variable polytrope index applied to planet and material models” MNRAS 452, 1375-1393 (2015)
- M. McCoy, K. Thielen et al, “A family of super congruences involving multiple harmonic sums”, Int. J. Number Theory DOI:10.1142/S1793042117500075

## Conference Presentations

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- **2017**
  - “Effects of Ice Morphology on the Arctic Mixed layer”, at AOPP Subdepartment Retreat, Oxford, UK, September 18-19. (Oral) - Awarded Best Talk
  - “Effects of Ice Morphology on the Arctic Mixed layer”, at UK Sea Ice Meeting 2017, Cambridge, UK, September 15th. (Poster)
- **2016**
  - “Computational investigation of boronic acids with common antioxidant species”, at American Chemical Society Fall Meeting 2016, Philadelphia, PA, August 21-25. (Poster)
  - “A variable polytrope index applied to planet and material models”, at American Astronomical Society Winter Meeting 2016, Kissimmee, FL, January 4-8. (Oral)
- **2015**
  - “Super Congruences Involving Multiple Harmonic Sums”, at Eckerd College Student Research Symposium, St. Petersburg, FL, March 11. (Poster)
  - “An Adaptive Solar Energetic Particle Removal Algorithm for the Compact Coronagraph (CCOR) Imaging Detector”, at 2015 NOAA Student Science & Education Symposium, Silver Springs, MD, July 28-30. (Oral)
- **2014**
  - “Modeling Mass-Radius Relationships of Planets Using Differential Equations”, at Eckerd College Student Research Symposium, St. Petersburg, FL, April 11. (Oral)
  - “Modeling Mass-Radius Relationships of Planets Using Differential Equations”, at American Association for Physics Teachers Winter Meeting 2014, Orlando, FL, January 4-7. (Oral)

## Training

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- University of Gothenburg's International Training on Ocean Gliders. *2017*
- Guest Student - Woods Hole Oceanographic Institution GFD Program *2017*
- Oxford NERC DTP Enterprise and Environment Course *2017*

## Academic Awards

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### Scholarships.....

- Oxford-Richards Graduate Scholarship (University of Oxford/Wadham College) *2016 - 2019*
- Barry Goldwater Scholarship (Goldwater Foundation) *2015 - 2016*
- NOAA Hollings Scholarship (NOAA) *2014 - 2016*
- Meacham Mathematics Memorial Scholarship (Eckerd College (EC)) *2014 - 2016*

### Honors.....

- Natural Sciences Collegium (NAS) Scholarship and Service Award. (EC -NAS) *2016*
- Meacham Mathematics Memorial Award (EC-Mathematics) *2016*
- Harry W. Ellis Award (EC-Physics) *2016*
- Membership in the Natural Sciences Collegium's Student Senate (EC-NAS) *2014 - 2016*
- Selected to participate in the Ford Apprentice Scholars Program (EC) *2014 - 2016*
- Selected to serve as a Peer Mentor for incoming Freshmen (EC) *2013 - 2014*
- Awarded the rank of Eagle Scout (Boy Scouts of America) *2011*